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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/986,532	11/09/2001	Jedrick J. Weldon	09710-1111	5779
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25537 7590 06/04/2002

WORLDCOM, INC.
TECHNOLOGY LAW DEPARTMENT
1133 19TH STREET NW
WASHINGTON, DC 20036

EXAMINER

TRINH, DUNG N

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 06/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,532

Applicant(s)

WELDON ET AL.

Examiner

D. Trinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, there is insufficient antecedent basis for "said in-band communication channel".

Claim Rejections - 35 USC § 103

3. Claims 1-7, 9-20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirek et al (US 5,878,032) in view of Diebboll et al (US 5,886,643).

Regarding claims 1, 4, 9, 22, and 23, Mirek discloses a system in which node A sends node B a measurement cell (probe message) at T1 and transfer delay Td (propagation time – claim 23) is determined, see col. 4, lines 7-8, 52-53 and equation 1.

Mirek differs from the claimed invention in that Mirek does not explicitly disclose that node A is a router, the network is private (claims 4/22), and that node A has an enclosure (claim 22). However, Diebboll teaches that a probe such as node A could ~~[sic]~~ be part of a router, see col. 4, lines 45-48. Combining hardware simplifies design and reduces cost. Therefore, it would have been obvious to one of ordinary skill in the

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art to include node A as part of a router, as taught by Diebboll, to simplify design. It is inherent that a router has an engine to forward packets through a port (claim 1) because that is what a router does. It would have been obvious to one skilled in the art to declare a network private by making it unavailable to the public and to use an enclosure, both to increase security and protection.

Mirek differs from claim 9 in that Mirek does not explicitly disclose software to send the measurement cell. However, it would have been obvious for one of ordinary skill in the art to implement a process as software running on, for example, a workstation, to increase flexibility in future upgrade(s).

Regarding claim 14, Diebboll discloses that a probe could be part of a router (ie. probing router), see col. 4, lines 45-48. Diebboll also discloses a Network Management System NMS that obtains information on traffic, performance, and problems. The NMS includes a report generator, see col. 5, lines 1-11. Diebboll differs from the claimed invention in that Diebboll does not mention a processor to receive probe information. However, such processor is inherent in the NMS workstation because a workstation cannot operate without a processor.

Regarding claim 2, Mirek discloses a value T3 to indicate when a reporting measurement cell (reply probe message) is sent from node B (destination probing router), see col. 4, lines 11-12. Node B also sends delay difference information Tb (remote latency indicator), see col. 4, lines 57-60. Mirek discloses that statistics such as round trip delay, cell transfer delay can be calculated, see col. 5, equations 3-6.

Regarding claim 3, Mirek differs from the claimed invention in that Mirek does not explicitly disclose that the probe mechanism can store service level stats. However,

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Diebboll discloses that probes can collect data and maintain statistical information for later analysis, see col. 4, lines 22-34. By having a probe maintaining its collected information, the load on central computing will be reduced. Therefore, to one of ordinary skill in the art, it would have been obvious to have the probes maintaining stats to lessen the central computing load in Mirek.

Regarding claim 5, Mirek discloses a Delay Result field to indicate the time between when Node B receives the measurement cell and when Node B responds, see col. 5, lines 65-67.

Regarding claim 6, Mirek differs from the claimed invention in that Mirek does not disclose a remotely programmable polling interval. However, Diebboll discloses a system that periodically polls the probes for data, see col. 5, lines 29-30. Using remotely programmable settings increases flexibility and reduce cost. Therefore, to one of ordinary skill in the art, it would have been obvious to remotely set the polling interval, as taught by Diebboll, to increase flexibility in Mirek.

Regarding claim 7, Mirek discloses that statistics such as round trip delay, cell transfer delay can be calculated, see col. 5, equations 3-6

Regarding claim 10, Mirek discloses a value T1 to indicate when a measurement cell (probe message) is sent from node A, see col. 4, lines 7-8.

Regarding claim 11, Mirek discloses a value T3 to indicate when a reporting measurement cell (reply probe message) is sent from node B (destination probing router), see col. 4, lines 11-12. Node B also sends delay difference information Tb (remote latency indicator), see col. 4, lines 57-60.

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Regarding claim 12, Mirek discloses that statistics such as round trip delay, cell transfer delay can be calculated, see col. 5, equations 3-6.

Regarding claims 13 and 15, as stated earlier, it would have been obvious to one skilled in the art to declare a network private by, for example, making it unavailable to the public.

Regarding claim 16, Mirek/Diebboll differ from the claimed invention in that they do not explicitly say that the router is at a customer premise. However, it would have been obvious to one of ordinary skill in the art to locate the router in any location that meets requirement, including, for example, customer premise.

Regarding claim 17, Diebboll discloses that the NMS report generator 50 can generate and display performance and utilization reports, see col. 5, lines 11-15.

Regarding claim 18, Mirek/Diebboll differ from the claimed invention in that they do not explicitly disclose reporting statistics on an Internet web site. However, it would have been obvious to one of ordinary skill in the art to communicate information through an Internet web site because such site can provide quick updates, ready access, and centralization of information.

Regarding claims 19 and 20, Diebboll discloses that the NMS can identify all servers talking to a node (topology information) and periodically poll the probes for data, see col. 5, lines 25-30.

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4. Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirek et al (US 5,878,032) in view of Diebboll et al (US 5,886,643) and prior art acknowledged by Applicant on page 2 of the specification.

Regarding claims 8 and 21, Mirek/Diebboll determine all traffic, including losses, between two nodes, see Diebboll, col. 5, lines 25-29 and 63-66. Mirek/Diebboll differ from the claimed invention in that they do not explicitly disclose determining availability or loss rate. However, as Applicant correctly points out on page 2, lines 10-12, of the specification, availability is a typical metric. Availability has been widely used to determine basically whether a resource is reliable enough to meet requirement. Therefore, to one of ordinary skill in the art, it would have been obvious to determine the availability in the system of Mirek/Diebboll to see if such network can meet required reliability.

Response to Arguments

5. Applicant's arguments filed March 15, 2002 have been fully considered.

Arguments with respect to claims 1-8 are moot in view of the new ground(s) of rejection.

Arguments with respect to claims 9-23 are not persuasive as explained below.

Applicant argued

a. "the present Office Acknowledges that Mirek et al. 'does not explicitly disclose that node A is a router'", see Remarks, p. 15, 2nd paragraph.

b. Mirek et al. fails to teach or suggest a probing router that generates and sends a probe message, see Remarks, p. 15, 3rd/4th paragraphs.

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c. Diebboll et al. fails to teach or suggest a probing router that generates and sends a probe message, see Remarks, p. 16, 3rd paragraph.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argued

d. Mirek et al. fails to recognize or address the noted problems with the Background Art probing techniques, see Remarks, p. 15, 2nd paragraph.

e. Diebboll et al. fails to recognize or address the noted problems with the Background Art probing techniques, see Remarks, p. 16, 3rd paragraph.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "recognize or address the noted problems with the Background Art probing techniques") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argued

f. The probes of Diebboll do not generate and send probe messages because they "merely collect and store information", see Remarks, p. 16, 3rd paragraph. In response, Examiner disagrees because there is no reason (and applicant has not provided any) why any probe that collects and stores information cannot generate and

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send messages. In fact, applicant's own probing router 207 receives (collects) the reply probe message and stores the data contained therein, see Specification, p. 8, 2nd paragraph.

g. Combining Diebboll ("combining hardware could simplify design and reduce cost") is conclusory, impermissible hindsight, and uncertain, see Remarks, p. 17, 2nd paragraph. In response, regarding "conclusory", it is unnecessary to provide proof for such simple justification. For example, any one skilled in the art knows that when two pieces of equipment are combined, there is one less power supply, the combined unit is at a single location, there is no need to design/pay for means to connect the two equipment, etc. There is no need to provide proofs for such basic concept unless one assumes less than the skill of one of ordinary skill in the art. Regarding "impermissible hindsight", the inclusion of a probe in a router is specifically disclosed by Diebboll, see Diebboll, col. 4, lines 45-48. Even without Diebboll, any one skilled in the art, looking at Fig. 1 of the present invention, for example, would see that the functions of workstation 1 and router 7 can be combined at least for the reasons discussed in this paragraph. Diebboll was cited to remove any doubt that such combination is possible.

Furthermore, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Regarding "uncertain", Examiner disagrees with

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applicant's selective negative interpretation of the word "could", which has been deleted.

The benefits of combining hardware would be certain to one of ordinary skill in the art.

h. The Office Action failed to provide adequate evidence of motivation because there are numerous ways to simplify design and reduce cost, see Remarks, p. 17, 2nd paragraph. In response, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Applicant argued

i. Mirek/Diebboll fail to teach or suggest a probing router that generates and sends a probe message. In response, as discussed, Mirek discloses a system in which node A sends node B a measurement cell (probe message), see col. 4, lines 52-53. Mirek differs from the claimed invention in that Mirek does not explicitly disclose that node A is a router. However, Diebboll teaches that a probe such as node A could [sic!] be part of a router, see col. 4, lines 45-48. Combining hardware simplifies design and reduces cost. Therefore, it would have been obvious to one of ordinary skill in the art to include node A as part of a router (probing router), as taught by Diebboll, to simplify design.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Trinh whose telephone number is 703-306-5620.

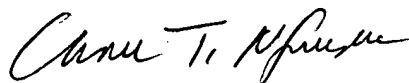
The examiner can normally be reached on Monday-Friday, 8am-3pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



D. Trinh
June 2, 2002



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